

In the claims:

Please amend claims 1, 5, 6, 11, 16, 17, 18, 22, and 23 as follows:

Sub C1
1. (Twice Amended) A load coil for insertion along a local loop, the load coil comprising:
2 a coupled inductor having first and second windings wrapped about an inductor core,
3 each winding having an input and an output, the coupled inductor configured to counteract a
4 parallel capacitance of the local loop to improve transmission of POTS-band signals across the
5 local loop;
6 a first capacitive element disposed between the input of the first winding and the input of
7 the second winding; and
8 a second capacitive element disposed between the output of the first winding and the output
9 of the second winding, the first capacitive element and the second capacitive element having
10 capacitances that are selected based upon an inter-winding capacitance between the first winding and
11 the second winding to permit passage of DSL signals across the load coil.

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5. (Twice Amended) The load coil of claim 1, wherein the first and second capacitive elements
2 increase an effective inter-winding capacitance of the first and second windings by at least a factor
3 of 5.

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C1
6. (Twice Amended) A load coil for insertion along a local loop, the load coil comprising:
a coupled inductor having first and second windings wrapped about an inductor core,
each winding having an input and an output, the coupled inductor configured to improve
transmission of POTS-band signals across the local loop;
a first capacitive element disposed in parallel with the first winding; and
a second capacitive element disposed in parallel with the second winding, the first capacitive
element and the second capacitive element having capacitances that are selected based upon an intra-
winding capacitance of either the first winding or the second winding to permit passage of DSL
signals across the load coil with low attenuation.

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11. (Once Amended) A system for transmitting DSL and POTS signals over a local loop, the
system comprising:
a first load coil for disposal along the local loop to condition the POTS signals, the first
load coil including a coupled inductor and multiple capacitive elements for increasing an
effective capacitance of the coupled inductor to improve transmission of DSL signals across the
first load coil, the multiple capacitive elements having capacitances that are selected based upon
a capacitance of the coupled inductor; and
a first DSL signal repeater for disposal along the local loop in series with the first load
coil to amplify the DSL signals, the first DSL signal repeater including a second load coil for
conditioning POTS signals passing therethrough.

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1 16. (Twice Amended) A load coil coupled to a local loop for improving simultaneous
2 transmission of POTS and DSL signals across the local loop in any direction, the load coil
3 comprising:
4 inductive means for conditioning the POTS signals as they traverse the local loop; and
5 capacitive means having capacitances based upon a capacitance of the inductive means,
6 the capacitive means coupled to the inductive means for permitting the DSL
7 signals to pass across the load coil.

8P
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1 17. (Once Amended) A system for transmitting DSL and POTS signals over a local loop, the
2 system comprising:
3 load coil means positioned along the local loop, the load coil means comprising inductive
4 means for conditioning POTS signals as they traverse the local loop and capacitive means having
5 capacitances based upon a capacitance of the inductive means coupled to the inductive means for
6 facilitating passage of DSL signals across the load coil; and
7 DSL signal amplification means positioned along the local loop for amplifying DSL
8 signals as they traverse the local loop.

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2 18. (Once Amended) A method for improving simultaneous transmission of POTS-band signals

and DSL signals across a local loop, comprising the steps of:

3 inductively coupling a first segment of the local loop to a second segment of the local loop

4 via a coupled inductor to condition the POTS-band signals traversing the local loop;

5 and

6 capacitively coupling the first segment of the local loop to the second segment of the

7 local loop via capacitive elements to pass the DSL signals traversing the local

8 loop with low attenuation, the capacitive elements having capacitances that are

9 selected based upon a capacitance of the coupled inductor.

Sub 1 22. (Once Amended) A system to improve simultaneous transmission of POTS-band signals and

CI 2 DSL signals across a local loop, the system comprising:

BT 3 a first local loop, the first local loop including

4 a first wire, and

5 a second wire;

6 a second local loop, the second local loop including

7 a third wire, and

8 a fourth wire;

9 a coupled inductor configured to condition the POTS-band signals traversing the first and

10 second local loops, the coupled inductor including

11 an inductor core,

12 a first inductor winding wrapped about the inductor core and coupling the first wire to

13 the third wire, and

14 a second inductor winding wrapped about the inductor core and coupling the second

15 wire to the fourth wire; and

16 capacitive elements configured to pass the DSL signals traversing the first and second local

17 loops, the capacitive elements including

18 a first capacitor coupling the first wire to the fourth wire, and

19 a second capacitor coupling the second wire to the third wire, the first capacitor

20 and the second capacitor having capacitances that are selected based upon

21 an inter-winding capacitance between the first inductor winding and the

22 second inductor winding.

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23. (Once Amended) A system to improve simultaneous transmission of POTS-band signals and DSL signals across a local loop, the system comprising:

a first local loop, the first local loop including

a first wire, and

a second wire;

a second local loop, the second local loop including

a third wire, and

a fourth wire;

a coupled inductor configured to condition the POTS-band signals traversing the first and second local loops, the coupled inductor including

an inductor core,

a first inductor winding wrapped about the inductor core and coupling the first wire to the third wire, and

a second inductor winding wrapped about the inductor core and coupling the second wire to the fourth wire; and

capacitive elements configured to pass the DSL signals traversing the first and second local loops, the capacitive elements including

a first capacitor coupling the first wire to the third wire, and

a second capacitor coupling the second wire to the fourth wire, the first capacitor and the second capacitor having capacitances that are selected based upon an intra-winding capacitance of either the first inductor winding or the second inductor winding.

Please add claims 24-25 as follows:

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1 24. (New) The load coil of claim 1, wherein the first and second capacitive elements each have a
2 capacitance at least five times the inter-winding capacitance between the first winding and the
3 second winding.

1 25. (New) The load coil of claim 6, wherein the first and second capacitive elements each have a
2 capacitance at least one hundred and twenty times the intra-winding capacitance of either the first
3 winding or the second winding.